



National Research University Higher School of Economics (HSE)

Basic Curriculum

Field of study 01.04.02 Applied Mathematics and Informatics  
 Educational Programme "Applied Statistics with Network Analysis"  
 Trajectories: "Network Analysis"  
 Implementing unit: Faculty of Social Sciences, HSE - Moscow

APPROVED  
 29.05.2023  
 Vice Rector  
 ROSHCHIN S.Y.  
 Signed with EDS

Years of Study: 2023/2024 - 2024/2025

Length of Programme: 2 years

Mode of Study: Full Time

Degree: Master's degree / MBA

Block Code	Course	Subject type	Credits	Credits by Years		Planned Educational Programme Development Results
				1	2	
	Degree Programme		120,00	60,00	60,00	
	Network Analysis (General track)		120,00	60,00	60,00	
	Key Seminars		15,00	7,00	8,00	
1	Working with Network Data (offered in a foreign language)	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-5, UC-1, UC-2, UC-4
2	Mentor's Seminar (offered in a foreign language)	C	3,00	1,00	2,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-3, PC-4, PC-5, UC-2, UC-3, UC-4, UC-6
3	Project Seminar (offered in a foreign language)	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, UC-2, UC-3, UC-4
4	Research Seminar "Computational Social and Network Sciences" (offered in a foreign language)	E	6,00	6,00		GPC-2.AMI, GPC-4.AMI, PC-1, PC-2, PC-4, UC-1, UC-2, UC-3
5	Research Seminar "Application of Network Theory to Business Analytics and Social Networks" (offered in a foreign language)	E	6,00	6,00		GPC-1.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-3, PC-5, UC-2, UC-3, UC-4
	Internship		30,00	5,00	25,00	
	Research Internship		30,00	5,00	25,00	
1	Work Experience Internship (offered in a foreign language)	C	9,00		9,00	GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, UC-2, UC-4, UC-6
2	Project (offered in a foreign language)	C	4,00		4,00	GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, UC-2, UC-4, UC-6
3	Final thesis preparation (offered in a foreign language)	C	12,00		12,00	GPC-3.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, UC-2, UC-5, UC-6

4	Term paper (offered in a foreign language)	C	5,00	5,00		GPC-1.AMI, GPC-2.AMI, PC-3, PC-4, PC-5, UC-1, UC-4, UC-5
Major			57,00	39,00	18,00	
Compulsory Courses			42,00	33,00	9,00	
1	Contemporary Data Analysis: Methodology and Methods of Interdisciplinary Research (offered in a foreign language)	C	6,00	6,00		GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, UC-1, UC-2, UC-4
2	Contemporary Decision Sciences: an Integrated Perspective (offered in a foreign language)	C	6,00	6,00		GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-2, PC-4, PC-5, UC-2, UC-3, UC-5
3	Applied Linear Models (offered in a foreign language)	C	6,00	6,00		GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-3, PC-4, UC-2, UC-4, UC-6
4	Probability Theory (offered in a foreign language)	C	3,00	3,00		GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-4, UC-2, UC-3, UC-4
5	Data Mining (offered in a foreign language)	C	3,00	3,00		GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, UC-1, UC-2, UC-4, UC-6
6	Introduction to Network Analysis (offered in a foreign language)	C	3,00	3,00		GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-1, PC-2, PC-5, UC-1, UC-2, UC-3
7	Methods of Statistical Consulting (offered in a foreign language)	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-2, PC-3, PC-4, UC-1, UC-3, UC-4
8	Structural Equation Modeling (offered in a foreign language)	C	6,00		6,00	GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-4, UC-1, UC-2, UC-4
9	Programming in R and Python (offered in a foreign language)	C	3,00	3,00		GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-1, PC-3, PC-4, UC-2, UC-4, UC-6
10	Introduction to Statistics (offered in a foreign language)	C	3,00	3,00		GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-2, PC-3, PC-4, UC-1, UC-2, UC-3
Elective Courses			15,00	6,00	9,00	
1	Categorical Data Analysis (offered in a foreign language)	E	3,00	3,00		GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, PC-5, UC-2, UC-4, UC-6
2	Multidimensional Data Analysis (offered in a foreign language)	E	3,00	3,00		GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-2, PC-3, PC-4, PC-5, UC-2, UC-4, UC-6
3	Advanced Network Analysis Methods (offered in a foreign language)	E	3,00	3,00		GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, UC-1, UC-2, UC-4, UC-6
4	Machine Learning (offered in a foreign language)	E	3,00	3,00		GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-4
5	Time Series Analysis (offered in a foreign language)	E	6,00		6,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-2, PC-3, PC-4, UC-1, UC-2, UC-3, UC-4
6	Unstructured Data Analysis (offered in a foreign language)	E	6,00		6,00	GPC-1.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-3, PC-5, UC-2, UC-4, UC-6

7	Multilevel Models (offered in a foreign language)	E	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-1, PC-3, PC-5, UC-2, UC-3, UC-4
8	Bayesian Data Analysis (offered in a foreign language)	E	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-5
9	Network Analysis: Statistical Approaches (offered in a foreign language)	E	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-4.AMI, PC-3, PC-4, PC-5, UC-1, UC-2, UC-3
10	Stochastic Models (offered in a foreign language)	E	3,00		3,00	GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, UC-2, UC-3, UC-4
	Magolego		15,00	9,00	6,00	
1	All-university Pool MAGOLEGO Courses (offered in a foreign language)	E	15,00	9,00	6,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-1, PC-2, PC-4, UC-2, UC-4, UC-6
	Final State Certification (FSC)		3,00		3,00	
1	Final Qualification Paper (offered in a foreign language)	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-1, PC-2, PC-4, UC-2, UC-3, UC-4, UC-5

**Curriculum agreed:**

Academic Supervisor	Климов И.А.	25.05.2023
Dean	MELVILLE A.Y.	25.05.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	26.05.2023

\* Subject type:

Compulsory course	C
Elective course	E